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10/626,824	07/23/2003	Randall Lewis Silagi	GIC-666	2532
43471	7590	04/30/2008	EXAMINER	
Motorola, Inc. Law Department 1303 East Algonquin Road 3rd Floor Schaumburg, IL 60196			KIM, PAUL	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.Schaumburg@motorola.com  
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<b>Office Action Summary</b>	<b>Application No.</b> 10/626,824	<b>Applicant(s)</b> SILAGI ET AL.	
	<b>Examiner</b> PAUL KIM	<b>Art Unit</b> 2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11, 13-24 and 26-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-24 and 26-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office action is responsive to the following communication: Amendment filed on 15 January 2008.
2. Claims 1-11, 13-24, and 26-28 are pending and present for examination.

### ***Response to Amendment***

3. Claims 1, 14, and 27-28 have been amended.
4. No claims have been cancelled.
5. No claims have been added.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claim 1-8, 14-21, and 27-28** are rejected under 35 U.S.C. 103(a) as being unpatentable over Cuccia (U.S. Patent No. 6,157,673), filed on 26 December 1996, and issued on 5 December 2000, in view of Anderson et al (U.S. Patent No. 6,181,706, hereinafter referred to as ANDERSON), filed on 26 September 1997, and issued on 30 January 2001, and in further view of MIN (U.S. Patent No. 7,088,732, hereinafter referred to as MIN), filed on 26 March 2002, and issued on 8 August 2006.
8. **As per independent claims 1 and 14**, CUCCIA, in combination with ANDERSON and MIN, discloses:

A method for collecting multimedia program information from a plurality of multimedia transport streams, comprising:

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receiving a plurality of transport streams, each of which contains program information regarding multimedia programs carried in the transport stream {See CUCCIA, C1:L11-14, wherein this reads over "extraction of program specific information (PSI) from the multiple transport streams"},

receiving requests for collecting program information, said requests identifying program information to be collected from one or more of the transport streams {See CUCCIA, C3:L21-23, wherein this reads over "the action of the decoder requires the extraction of program specific information (PSI) from the transport stream newly applied to the transport decoder"} and including a first list of requested program information and a second list of requested program information different from the first list of requested program information {See MIN, C1:L44-53, wherein this reads over "[a] synchronous signal detecting and PID extracting unit 210 extracts the 13-bit PID of a current received packet and stores the 13-bit PIN"},

obtaining program information packets {See ANDERSON, C4:L52-58, wherein this reads over "[a] transport stream is a collection of transport stream packets, linked by standard tables"} from the plurality of transport streams as they are received {See CUCCIA, C2:L25-39, wherein this reads over "decoding data corresponding to a program from a first transport stream"}, the obtained program information packets containing first received program information and second received program information; and

matching the first received program information {See CUCCIA, C2:L25-39, wherein this reads over "extracting program specific information from a second transport stream, indicating a correspondence between packet ID numbers and data for programs in said stream"} with a first list of requested program information {See ANDERSON, C9:L1-34, wherein this reads over "[t]he 13 bit PID value is sent to the PID filter to determine if a match occurs. Packets that mach a PID filter entry are forwarded, while all other packets, including null packets, are discarded"}; and

if the first received program information matches information in the first list of requested program information {See MIN, C2:L45-50, wherein this reads over "a first comparing unit to compare the first portion of the current PID with the first portion of the possible PIDs stored in the plurality of PID stores; and a second comparing unit to compare the second portion of the current PID with the second portion of the possible PIDs stored in the plurality of PID stores"; and C2:L50-55, wherein this reads over "a control unit for generating a match signal if the first portion of the current PID matches the first portion of one of the possible PIDs . . . "},  
 matching the second received program information {See CUCCIA, C2:L25-39, wherein this reads over "extracting program specific information from a second transport stream, indicating a correspondence between packet ID numbers and data for programs in said stream"} with a second list of requested program information {See ANDERSON, C9:L1-34, wherein this reads over "[t]he 13 bit PID value is sent to the PID filter to determine if a match occurs. Packets that mach a PID filter entry are forwarded, while all other packets, including null packets, are discarded"}.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by CUCCIA by combining it with the invention disclosed by ANDERSON and MIN. The results of this combination would lead to a method for collecting multimedia program information from a plurality of transport streams through the use of PID filters which filters incoming transport packets. Additionally, the results of this combination would lead to a method

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for comparing a plurality of requested program information with a plurality of received program information.

One of ordinary skill in the art would have been motivated to do this modification such that program identifier data may be captured from a broadband transcoder multiplexer.

9. **As per dependent claims 2 and 15**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 1 wherein at least once of the transport streams is an MPEG transport stream {See CUCCIA, C1:L7-10, wherein this reads over "multiple transport streams, such as MPEG-2 [] encoded data streams"}.

10. **As per dependent claims 3 and 16**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 1 wherein the requested program information is comprised of multiple fields {See CUCCIA, Figure 3}.

11. **As per dependent claims 4 and 17**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 3 wherein said fields include at least one Program Identification (PID) Code {See CUCCIA, Figure 3; and C3:L32-33, wherein this reads over "[w]ithin each header PH is a 13 bit packet identification number or PID"}.

12. **As per dependent claims 5 and 18**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 1 wherein the steps of matching the first received program information and matching the second received program information is done asynchronously with respect to said receiving step {See CUCCIA, C2:L59-63, wherein this reads over "transport streams may be supplied from different source types such as modems, asynchronous transfer mode (ATM) networks"}.

13. **As per dependent claims 6 and 19**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 1 further comprising the step of notifying an application requesting the program information once a match is located {See CUCCIA, C4:L59-64, wherein this reads over "the extracted PSI is conveyed via microcontroller to the mapping function of the host processor of decoding system where it is used to store and maintain a global map of channel number s to transport stream and associated PSI"}, for the first received program information and the second received program information.

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14. **As per dependent claims 7 and 20**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 6 wherein the application requesting the program information periodically queries the status of the request {See CUCCIA, C3:L10-12, wherein this reads over "[m]apping function is accessed in response to a channel change request issued from a user interface function"}.

15. **As per dependent claims 8 and 21**, CUCCIA, in combination with ANDERSON and MIN, discloses:

The method of claim 1 wherein the program information carried in the transport streams is received out of the sequence specified in the request {See CUCCIA, C1:L21-23, wherein this reads over "[a]ny one MPEG-2 transport stream may contain multiple programs for presentation to the user"}.

16. **Claims 9 and 22** are rejected under 35 U.S.C. 103(a) as being unpatentable over CUCCIA, in view of ANDERSON and MIN, and in further view of Metz et al (U.S. Patent No. 5,666,293), filed on 3 July 1995, and issued on 9 September 1997.

CUCCIA, ANDERSON, and MIN teach the limitations of claims 1-8, 14-21, and 27-28 for the reasons stated above.

CUCCIA, ANDERSON, and MIN differ from the claimed invention in that they fail to expressly disclose the division of lists for search purposes (claims 9 and 22).

17. **As per dependent claims 9 and 22**, CUCCIA, in combination with ANDERSON, MIN, and METZ, discloses:

The method of claim 1 wherein said processing includes dividing the requested information into multiple lists and searching each list as program information is received from the transport streams {See METZ, C12:L40-45, wherein this reads over "a number of packets used to find and decode desired sequences of packets in the stream, for example a program association map (PID), one or more program map tables and a network table"}.

The combination of inventions disclosed by CUCCIA, ANDERSON, MIN, and METZ would disclose an invention wherein multiple lists are created for search of program information as the program information is received from the transport streams. Therefore, it would have been obvious to one of

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ordinary skill in the art at the time the invention was made to modify the above invention suggested by CUCCIA, ANDERSON, and MIN by combining it with the invention disclosed by METZ.

One of ordinary skill in the art would have been motivated to do this modification to improve search efficiency.

18. **Claims 10-11 and 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over CUCCIA, in view of ANDERSON and MIN, in view of METZ, and in further view of Look et al (U.S. Patent No. 6,747,906, hereinafter referred to as LOOK), filed on March 30, 2000, and issued on June 29, 2004.

CUCCIA, ANDERSON, and MIN teach the limitations of claims 1-8, 14-21, and 27-28 for the reasons stated above.

CUCCIA, ANDERSON, and MIN differ from the claimed invention in that they fail to expressly disclose a linear search algorithm which is used to conduct the search (claims 10 and 23).

CUCCIA differs from the claimed invention in that CUCCIA fails to disclose a binary search algorithm which is used to conduct the search (claims 11 and 24).

19. **As per dependent claims 10 and 23**, CUCCIA, in combination with ANDERSON, MIN, METZ and LOOK, discloses a linear search algorithm which is used to conduct the search {See LOOK, col. 6, lines 1-8, wherein this reads over "linearly parse the stream from the beginning to find the desired location"}.

The combination of inventions disclosed in by CUCCIA, METZ and LOOK would disclose an invention wherein a linear search algorithm is used to conduct the search of transport streams. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by CUCCIA and METZ by combining it with the invention disclosed by LOOK.

One of ordinary skill in the art would have been motivated to do this modification because a linear search algorithm is a well-known search method within the art.

20. **As per dependent claims 11 and 24**, CUCCIA, in combination with ANDERSON, METZ and LOOK, discloses a binary search algorithm which is used to conduct the search {See LOOK, col. 5, line 66 – col.

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6, line 6, wherein this reads over "[a] binary search can be performed on a stored file to index into a stream. Each stream is stored as a sequence of fixed-size segments enabling fast binary searches".

The combination of inventions disclosed in by CUCCIA, ANDERSON, MIN, METZ and LOOK would disclose an invention wherein a binary search algorithm is used to conduct the search of transport streams. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the above invention suggested by CUCCIA and METZ by combining it with the invention disclosed by LOOK.

One of ordinary skill in the art would have been motivated to do this modification because a binary search algorithm, a well-known search method within the art, improves the search efficiency.

21. **Claims 13 and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over CUCCIA, in view of ANDERSON and MIN, and in further view of Official Notice.

22. **As per dependent claims 13 and 26**, the Examiner takes Official Notice that it would have been obvious to one of ordinary skill in the art to have multiple receivers simultaneously receiving requests from different applications.

### ***Allowable Subject Matter***

23. Claims 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Response to Arguments***

24. Applicant's arguments with respect to claims 1-11, 13-24, and 26-28 have been considered but are moot in view of the new ground(s) of rejection. Furthermore, regarding Applicant's arguments directed to those previously asserted in prior response, Applicant is directed to the Advisory Action dated 29 January 2008 and the Office action dated 29 May 2008.



***Conclusion***

25. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

26. Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL KIM whose telephone number is (571)272-2737. The examiner can normally be reached on M-F, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Apu Mofiz can be reached on (571) 272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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